

Tohoku Bubble Chamber Magnet
Normal Parameters and Trip Levels

W. Craddock
May 3, 1985

Item	Trip Levels Hi/Low	Normal Levels	Flow Meter Panel & Auxiliary Readouts	Comments
Power supply current	--	703 amps		Power supply current ~ mag current +3 amps
Magnet current	710 amps	700 amps		
Quench voltage	50/-50 mV	(-23.5), -1.5 mV*		*(charging), normal @ 700 amps
Magnet voltage	--	(18.5), 0 V*		*(charging), normal @ 700 amps
Power supply voltage	--	(18.7), 3.0 V*		*(charging), normal @ 700 amps
Magnet ground current	0.025 amps	400 μ A		Normal level 580 μ A actually measured
Magnet recovery current	--			Not used
LHe level	1" low	1" to 35"		Dewar 100% full 39"
LHe probe current	63 mA low	70 mA		
LN ₂ level	--	15% to 80%		100% = 100% full
Magnet lead voltage A-1	\pm 40 mV/ \pm 20 mV**	14 mV/10 mV**		**upper portion of lead/lower portion read on relay meters

Magnet lead voltage A-2	± 40 mV/ ± 20 mV	12 mV/10 mV**		**upper portion of lead/lower portion read on relay meters
Magnet lead voltage B-1	± 40 mV/ ± 20 mV**	11 mV/10 mV**		**upper portion of lead/lower portion read on relay meters
Magnet lead voltage B-2	± 40 mV/ ± 20 mV**	16 mV/10 mV**		**upper portion of lead/lower portion read on relay meters
Dump resistor temp	50°C	25 to 40°C		~185°C after 700 amp discharge
He gas flow A-1	2.65/1.0 Volt	1.33 Volt	40(80/30)SCFH ⁺	⁺ Normal (hi trip/low trip)
He gas flow A-2	2.65/1.0 Volt	1.33 Volt	40(80/30)SCFH ⁺	⁺ Normal (hi trip/low trip)
He gas flow B-1	2.65/1.0 Volt	1.33 Volt	40(80/30)SCFH ⁺	⁺ Normal (hi trip/low trip)
He gas flow B-2	2.65/1.0 Volt	1.33 Volt	40(80/30)SCFH ⁺	⁺ Normal (hi trip/low trip)
Radial arm A-1	—	—	—	65 SCFH
Radial arm A-2	—	—	—	65 SCFH
Radial arm B-1	—	—	—	65 SCFH
Radial arm B-2	—	—	—	65 SCFH
Dewar neck A	—	—	—	12 SCFH
Dewar neck B	—	—	—	12 SCFH

Dewar pressure A	2 psig
Dewar pressure B	2 psig
A side vacuum	5×10^{-6} torr
B side vacuum	$< 10^{-7}$ torr